

**General Cleanup of DPS Requirements
CCR 96-0996
Based on 0731 Baseline**

Table 3 -- Make the following changes to the L4s (Implement Table 2 first!)

| L4 id | req-key | rel | req_type | req_status | ver_method | CCR | clarification | text |
|--------------------|---------|-----|------------|------------|------------|--------------------|---|--|
| <u>S-CLS-01630</u> | 9837 | A | functional | | | | | The DESKT CI shall provide a GUI to allow SCFs to request a QA metadata update with update data. |
| S-DPS-20100 | 10045 | A | interface | approved | demo | <u>un-verified</u> | <u>MSS not used to meet this requirement; Resource Management polls on availability of Data Processing resources; other info provided via COTS GUIs</u> | The PRONG CI shall request information about the health and availability of a Hardware Resource by using a Systems Management Subsystem (MSS) provided Resource Management API (Application Program Interface) |
| S-DPS-20130 | 4364 | A | interface | approved | demo | | | The PRONG CI shall provide Fault Management data to the MSS using a MSS provided Fault Management API. |
| S-DPS-20140 | 10094 | A | interface | approved | demo | <u>unvriied</u> | <u>Performance info of PGEs captured by Exec. Management in PDPS DB; PRONG custom S/W is not measurable on the time scale of the MSS polling cycle.</u> | The PRONG CI shall report PRONG performance events to the MSS. |
| S-DPS-20160 | 436 | A | interface | agreed | demo | | | The PRONG CI shall provide Accountability Management data to the MSS using a MSS provided Accountability Management API. |

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| S-DPS-20170 | 4368 | A | procedural | approved | demo | | | The operations staff shall have the capability to modify the configuration of Data Processing subsystem Hardware resources. |
| S-DPS-20210 | 4372 | A | functional | approved | demo | <u>unverified</u> | Provided via COTS GUI display of H/W and PGEs; also via status returns on all PRONG components | The PRONG CI shall have the capability to determine the Operational state of a Hardware or Software component. |
| S-DPS-20220 | 4373 | A | functional | approved | demo | | | The operations staff shall have the capability to request a Data Processing Subsystem Resource Utilization Report from the MSS based on time span, resource classification, or operational role. |
| S-DPS-20230 | 10095 | A | interface | approved | demo | | | The PRONG CI shall report PRONG security events to the MSS. |
| S-DPS-20240 | 4375 | A | interface | approved | demo | | | The PRONG CI shall provide Scheduling Management data to the MSS using a MSS provided Scheduling Management API. |
| S-DPS-20340 | 4377 | A | functional | approved | demo | <u>unverified</u> | | The PRONG CI shall reject restrict the ability to a Ccancel a Data Processing Request to if the Cancel Data Processing Request is received from an unauthorized source |
| S-DPS-20410 | 4379 | A | functional | approved | demo | <u>unverified</u> | <u>Syntactically correct DPRs are constructed but range and limit checking are not performed. Note that DPR objects are created in Planning</u> | The PRONG CI shall validate the information associated with the Data Processing Request. |
| S-DPS-20420 | 438 | A | functional | approved | demo | | | The PRONG CI shall reject a Data Processing Request if the Data Processing Request is received from an unauthorized source. |

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| | 0 | | | | | | | |
| S-DPS-20440 | 4 3 8 2 | A | functional | approved | demo | | | The PRONG CI shall take a pre-determined error recovery action if the level of validation required for execution in the Data Processing Operational Environment has not been attained by the PGE version identified in the Data Processing Request. |
| S-DPS-20490 | 4 3 8 6 | A | functional | approved | demo | <u>un-verified</u> | All queued Data Processing Requests (DPRs) are valid given that only valid Plpr objects can successfully become instantiated; only successfully created PIDpr objects are passed to Job Management | The PRONG CI shall queue only validated Data Processing Requests |
| S-DPS-20510 | 4 3 8 8 | A | interface | approved | demo | <u>un-verified</u> | RLS B = capability to manage on-demand and manage reprocessing. Rel. A: Source of all DPRs is Planning; status provided to Planning when DPR is inserted | The PRONG CI shall respond to the source of the Data Processing Request with a Data Processing Request Response upon the completion of validation and queue processing. |
| S-DPS-20620 | 4 3 9 2 | A | functional | approved | demo | <u>unverified</u> | All needed metadata is contained in the header of the ECS prouduct when staged. | The PRONG CI shall be able to determine that the metadata associated with a ECS Data Product required for PGE execution requires staging. |
| S-DPS-20670 | 4 3 9 7 | A | functional | approved | demo | <u>un-verified</u> | Metadata refered to here is the MCF provided to the PGE at run time and/or the user run time parameters needed to support PGE execution; 'staging' is not appropriate | The PRONG CI shall be able to determine that metadata associated with a PGE requires staging. |
| <u>S-DPS-20735</u> | <u>N E W</u> | <u>A</u> | <u>functional</u> | <u>approved</u> | <u>demo</u> | <u>unverified</u> | . | The PRONG CI shall provide the capability to terminate the data destaging process |
| S-DPS-20740 | 4 4 0 4 | A | interface | approved | demo | <u>un-verified</u> | No such interface defined or planned with DSS | The PRONG CI shall send an Data Request message to the SDSRV CI to terminate the data staging process. |
| S-DPS-20750 | 4 4 0 5 | A | interface | approved | demo | <u>un-verified</u> | Completion status is assoc. with the DPR in the PDPS DB to note that it has been stopped; System failures noted to the Event Log; | The PRONG CI shall send a Complete Notification Status message to the source of the Data Processing Request if the data staging process was not completed |

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| | | | | | | | | successfully for the Data Processing Request. |
| S-DPS-20780 | 4408 | A | interface | approved | demo | <u>un-verified</u> | <u>Metadata is in the granule headers</u> | The PRONG CI shall accept metadata from the SDSRV CI. |
| S-DPS-20870 | 4417 | A | interface | approved | demo | <u>un-verified</u> | <u>Completion status is assoc. with the DPR in the PDPS DB to note that it has been stopped; System failures noted to the Event Log.</u> | The PRONG CI shall send a Complete Notification Status message to the source of the Data Processing Request if the data destaging process was not completed successfully for the Data Processing Request. |
| S-DPS-21160 | 4427 | A | interface | approved | demo | <u>un-verified</u> | <u>PRONG creates the TK Status Log File and PGE Status and Error Log</u> | The PRONG CI shall create a Status Message File to be used by the SDP Toolkit CI to collect Toolkit status and error information about the execution of a PGE. |
| S-DPS-21170 | 4428 | A | interface | approved | demo | <u>un-verified</u> | <u>This is regarding customization of error codes. This refers to static lookup files (status message files) that are staged by PRONG, not created.</u> | The PRONG CI shall create User Status Message Files to be used by the SDP Toolkit CI during PGE execution if requested through the data defining the characteristics of the PGE. |
| S-DPS-21320 | 4434 | A | functional | approved | demo | | | The PRONG CI shall use a SDP Toolkit API to associate Processing-Specific Metadata with each Granule of a generated Data Product. |
| S-DPS-21460 | 4436 | A | functional | approved | demo | <u>un-verified</u> | <u>Such metadata provided via the ASCII metadata file.</u> | The PRONG CI shall use a SDP Toolkit API to associate Q/A-Specific Metadata with each Granule of a Data Product. |
| S-DPS-21490 | 4437 | A | functional | approved | demo | <u>un-verified</u> | <u>QA is in the headers of all products. All products also contain URs of input products. Reporting from inventory provides the needed information</u> | The PRONG CI shall record the Q/A-Specific Metadata of each input Data Product as part of the Q/A-Specific Metadata of the Granule of a Data Product. |
| S-DPS-21500 | 443 | A | functional | approved | demo | <u>un-verified</u> | <u>In the same way as an ordinary PGE</u> | The PRONG CI shall use algorithms provided by the scientists to perform automated QA on generated Data Products. |

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| | 8 | | | | | | | |
| S-DPS-21510 | 4 4 3 9 | A | functional | approved | demo | <u>un-verified</u> | <u>QA parameters are part of MCF; extracted from ASCII metadata file</u> | The PRONG CI shall support the capability to update Q/A metadata as required by the execution of a PGE performing automated Q/A. |
| S-DPS-21520 | 4 4 4 0 | A | interface | approved | demo | | | The PRONG CI shall coordinate the deletion of the outputs of a PGE which were temporarily stored in the SDSRV CI. |
| S-DPS-21530 | 4 4 4 1 | A | functional | approved | demo | <u>un-verified</u> | <u>Actual names are assigned in Planning</u> | The PRONG CI shall assign a unique Granule Identifier to each Granule of a generated Data Product. |
| S-DPS-21560 | 4 4 4 4 | A | functional | approved | demo | <u>un-verified</u> | <u>Applies to processor failure, not disk failure.</u> | If the resource fails during the execution of a PGE, the PRONG CI shall be capable of initiating the execution of the PGE without having to regenerate that PGE's input data. |
| S-DPS-21580 | 4 4 4 6 | A | interface | approved | demo | <u>un-verified</u> | <u>Completion info provided to PLN as only source of DPRs in Rel. A; 2nd phrase ("or the outputs...") is not applicable to Rel A;</u> | The PRONG CI shall send a Complete Notification Status message to the source of the Data Processing Request at the completion of PGE execution if the execution was terminated by the PRONG CI or the outputs of the PGE did not require destaging. |
| S-DPS-21700 | 4 4 4 8 | A | functional | approved | demo | | | The operations staff shall have the capability of terminating the data staging process for a Data Processing Request. |
| S-DPS-21710 | 4 4 4 9 | A | functional | approved | demo | | | The operations staff shall have the capability of terminating the data destaging process for a Data Processing Request. |
| S-DPS-21720 | 4 4 5 | A | functional | approved | demo | | | The operations staff shall have the capability of canceling the processing of a Data Processing Request. |

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| | 0 | | | | | | | |
| S-DPS-21750 | 4 4 5 3 | A | functional | approved | demo | | | The operations staff shall have the capability of modifying the information associated with the Data Processing Request. |
| S-DPS-21760 | 4 4 5 4 | A | functional | approved | demo | | | The operations staff shall have the capability of viewing the Processing Queues. |
| S-DPS-21770 | 4 4 5 5 | A | functional | approved | demo | | | The operations staff shall have the capability of requesting the status of a Data Processing Request. |
| S-DPS-21780 | 4 4 5 6 | A | functional | approved | demo | | | The operations staff shall have the capability of reporting resource management information. |
| S-DPS-21790 | 4 4 5 7 | A | functional | approved | demo | | These capabilities are needed to perform Manual Q/A. | The operations staff shall have the capability of viewing a Data Product. |
| S-DPS-21800 | 4 4 5 8 | A | functional | approved | demo | | These capabilities are needed to perform Manual Q/A. | The operations staff shall have the capability of viewing the algorithms used to generate a Data Product. |
| S-DPS-21810 | 4 4 5 9 | A | functional | approved | demo | | These capabilities are needed to perform Manual Q/A. | The operations staff shall have the capability of viewing the ECS Data Products used to generate a Data Product. |
| S-DPS-21820 | 4 4 6 0 | A | functional | approved | demo | | These capabilities are needed to perform Manual Q/A. | The operations staff shall have the capability of viewing the Calibration Coefficient Data used to generate a Data Product. |
| S-DPS-21830 | 4 4 | A | functional | approved | demo | | These capabilities are needed to perform Manual Q/A. | The operations staff shall have the capability of viewing the Ancillary Data Products used to generate a |

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| | 6 1 | | | | | | | Data Product. |
| S-DPS- 21840 | 4 4 6 2 | A | functional | approved | demo | | These capabilities are needed to perform Manual Q/A. | The operations staff shall have the capability of viewing the Status Information files associated with the generated Data Product. |
| S-DPS- 21850 | 4 4 6 3 | A | functional | approved | demo | | These capabilities are needed to perform Manual Q/A. | The operations staff shall have the capability of viewing all metadata associated with the generation of a Data Product. |
| S-DPS- 21990 | 4 4 7 6 | A | functional | approved | demo | | | The PRONG CI shall provide a user interface to suspend the processing of a Data Processing Request. |
| S-DPS- 22000 | 4 4 7 7 | A | functional | approved | demo | | | The PRONG CI shall provide a user interface to resume suspended processing of a Data Processing Request. |
| S-DPS- 22010 | 4 4 7 8 | A | functional | approved | demo | <u>un- verified</u> | | The PRONG CI shall provide a user interface to view the data <u>job definition information</u> associated with the Data Processing Request. |
| S-DPS- 22050 | 4 4 8 3 | A | functional | approved | demo | <u>un- verified</u> | These capabilities are needed to perform Manual Q/A. | The PRONG CI shall provide an interface to support the selection of visual display of a EOSHDF format Data Product <u>files for visual display</u> . |
| S-DPS- 22060 | 4 4 8 4 | A | functional | approved | demo | | These capabilities are needed to perform Manual Q/A. | The PRONG CI shall provide an interface to support the visual display of the algorithms used to generate a Data Product. |
| S-DPS- 22070 | 4 4 8 5 | A | functional | approved | demo | | These capabilities are needed to perform Manual Q/A. | The PRONG CI shall provide an interface to support the visual display of the ECS Data Products used to generate a Data Product. |

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| S-DPS-22080 | 4 4 8 6 | A | functional | approved | demo | | These capabilities are needed to perform Manual Q/A. | The PRONG CI shall provide an interface to support the visual display of the Calibration Coefficient Data used to generate a Data Product. |
| S-DPS-22090 | 4 4 8 7 | A | functional | approved | demo | | These capabilities are needed to perform Manual Q/A. | The PRONG CI shall provide an interface to support the visual display of the Ancillary Data Products used to generate a Data Product. |
| S-DPS-22100 | 4 4 8 8 | A | functional | approved | demo | <u>un-verified</u> | These capabilities are needed to perform Manual Q/A. | The PRONG CI shall provide an interface to support the selection of visual display of the Status Information Production History files associated with the generated selected Data Product for visual display |
| S-DPS-22110 | 4 4 8 9 | A | functional | approved | demo | | These capabilities are needed to perform Manual Q/A. | The PRONG CI shall provide an interface to support the visual display of all metadata associated with the generation of a Data Product. |
| S-DPS-22120 | 4 4 9 0 | A | functional | approved | demo | | | The PRONG CI shall support a capability to alert the operations staff of a Data Product which is being stored temporarily in the Data Server. |
| S-DPS-22130 | 4 4 9 1 | A | functional | approved | demo | | | The PRONG CI shall support a capability to alert the operations staff of a Data Product which requires quality assurance activities. |
| S-DPS-22230 | 4 4 9 5 | A | functional | approved | demo | <u>un-verified</u> | <u>No 'position in queue' information is available; will indicate that it is queued.</u> | The PRONG CI shall provide current queue position as part of the status information of a Data Processing Request. |
| <u>S-DPS-22300</u> | <u>N E W</u> | <u>A</u> | <u>functional</u> | <u>approved</u> | <u>demo</u> | <u>un-verified</u> | | <u>The PRONG CI shall, in support of production history data generation, send the following information to SDSRV CI for each production job run:</u> <u>a. Processing History Log</u> <u>b. PCF</u> <u>c. Toolkit Status Logs</u> |
| S-DPS- | | A | functional | approved | demo | <u>un-</u> | | The PRONG CI shall accept Operations |

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| 22400 | 4 4 9 9 | | | | | <u>verified</u> | | Commands to suspend, resume, or cancel the processing of a Data Processing Request. |
| S-DPS-31020 | 5 1 5 6 | A | functional | approved | demo | <u>un-verified</u> | | The PRONG CI shall provide, at a minimum, the following metadata information to the SDP Toolkit with SDPF-generated L0 data a. Actual start time of staged L0 data b. Actual end time of staged L0 data c. Number of physical L0 data files staged d. Start time of L0 data as requested by EOS investigators through the planning/processing system e. End time of L0 data as requested by EOS investigators through the planning/processing system f.d APID of each L0 data file g.e Orbit number or orbit number range of the staged L0 data file |
| S-DPS-40020 | 4 5 4 7 | A | interface | approved | demo | <u>un-verified</u> | The Science Software Delivery Package may contain many elements (e.g., software, test data, scripts, test results, documentation, etc.) needed for science software I&T (SSIT). The scope of the package is defined by the SSIT process tailored for the DAAC and instrument team. A science software delivery package may be only an update to a single element, e.g., updated calibration coefficient files. | The AITTL CI shall have the capability to receive a Science Software Delivery from the Science Data Server. |
| S-DPS-40830 | 4 5 7 7 | A | functional | approved | demo | <u>un-verified</u> | <u>EOSView only supports EOS HDF formats. Would need to use IDL with user providing additional inputs</u> | The data visualization capability of the AITTL CI shall include the capability to read ASCII, binary, or HDF files. |
| S-DPS-40840 | 4 5 7 8 | A | functional | approved | demo | <u>un-verified</u> | <u>EOSView only supports EOS HDF formats. Would need to use IDL with user providing additional inputs</u> | The data visualization capability of the AITTL CI shall include the capability to allow the operations staff to specify a custom input data format. |
| S-DPS-41330 | 4 6 0 | A | functional | approved | demo | <u>un-verified</u> | | The AITTL CI shall provide to the operations staff, via a GUI, the capability to add a new PGE Database Entry. |

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| | 7 | | | | | | | |
| S-DPS-41340 | 4608 | A | functional | approved | demo | <u>un-verified</u> | <u>Database entry is not deleted but is deactivated</u> | The AITTL CI shall provide to the operations staff, via a GUI, the capability to remove a specific PGE Database Entry. |
| S-DPS-41910 | 9253 | A | functional | | | | | The AITTL CI shall provide to the operations staff the capability to retrieve a copy of a specific Science Software Archive Package. |
| S-DPS-41920 | 9252 | A | functional | | | | <u>The Science Software Archive Package contains the set of information/data resulting from the science software I&T process. It includes, in general, the same set of elements as were delivered in the corresponding Science Software Delivery Package.</u> | The AITTL CI shall provide to the operations staff the capability to store a Science Software Archive Package to the Data Server. |
| S-DPS-42330 | 4641 | A B | functional | approved | demo | | | The operations staff shall have the capability to run binary executables without impacting other ongoing DAAC activities. |
| S-DPS-42630 | 4660 | A B | functional | approved | demo | <u>un-verified</u> | | The operations staff shall have the capability of run PGEs in a parallel test or for a commissioning period, utilizing the Planning and Processing Subsystems and the Product output flagged as "test". |

Table 4 – RBR Requirements Changes

| RBR_id | req_key | req_category | segment | req_type | s_verification_method | s_verification_status | a_verification_method | CCR | text | interpretation text |
|------------|---------|-------------------|---------|------------|-----------------------|-----------------------|-----------------------|-----|--|---------------------|
| PGS-0600#A | 4191 | mission-essential | SDPS | functional | test | un-verified | test | | The PGS shall provide an algorithm and calibration test and validation environment that is fully compatible with but isolated from the operational production environment. | A: CERES, LIS |